Mark Scheme

AddSAM 2022

Pearson BTEC Level 1/Level 2 Firsts Award in Digital Information Technology

Unit 3 (BIT03)

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- All marks on the mark scheme should be used appropriately.
- All marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if a candidate's response is not worthy of credit according to the mark scheme.
- Where some judgment is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt about applying the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed-out work should be marked UNLESS the candidate has replaced it with an alternative response.
- Phonetic spelling should be accepted.

Question Number	Answer	Mark
1 (a)	Award **one** mark for each correctly given benefit, up to a maximum of **two** marks from: • Global audience • Open 24/7 • Able to communicate directly with customers • Saves money • Provides analytics • Gives the company credibility • Can be upscaled to meet demand Accept any other appropriate response	**2**

Question Number	Answer	Mark
1 (b)	Award **one** mark for a correct external threat and **one** mark for a justification for the threat, up to a maximum of **two** marks. • Unauthorised access (1) as someone could change/delete/steal the data (1) • Ransomware (1) as it could freeze the website until they paid money (1) • Malware (1) as this could corrupt the website (stopping it working) (1) • Man in the middle attack (1) could be used to steal data when it is being uploaded to / downloaded from the website (1) • Social engineering (1) could be used to gain admin access (to the website server) (1) Accept any other appropriate response	**2**

Question Number	Answer	Mark
1 (c)	Award **one** mark for the correct design feature and **one** mark for a justification for that feature, up to a maximum of **two** marks. • Use common icons e.g. house for home button (1) so it is clear what buttons do (1) • Non clashing colours (1) so that content is clear to the user / helps colour blind users (1) • Readable font types (1) so that the text is accessible to more people (1) • Appropriate white space (1) so that the website is not cluttered / confusing (1) Accept any other appropriate response	**2**

Question Number	Answer	Mark
1 (d)	Award **one** mark for each correct feature of a strong password and **one** mark for a justification for that feature, up to a maximum of **two** marks. • Mixture of uppercase, lowercase, symbols and numbers (1) because a complex password would take longer to crack (1) • Nothing personal to the user (1) because it would be easy for a hacker to find this information (1) • Not used for multiple accounts (1) because if one account password was gained, then the hacker could access all the accounts (1) • No dictionary words/names (1) because password hacking software can easily find commonly used names/words (1) • Minimum of 8 characters (1) because the longer the password the more secure it is (1) Accept any other appropriate response	**2**

Question Number	Answer	Mark
1 (e)	Award **one** mark for the correct benefit of cloud storage and **one** mark for a justification of each that benefit, up to a maximum of **four** marks. • Synchronisation (1) so it is available on other devices (1) • Availability (24/7) (1) because you can access your files outside of office hours (1) • Scalability (1) because if you run out (of space) you can easily increase this by purchasing more (1) • Disaster recovery (1) as you can recover lost data from the storage/have a current backup (1) • No local storage needed (1) which saves money on expensive hardware/servers (1) Accept any other appropriate response	**4**

Question Number	Answer	Mark
2 (a)	Award **one** mark for each correct example of user access restrictions, up to a maximum of **two** marks from: • Physical security measures (locks) • Using correct settings and levels of permitted access • Biometrics • Two-factor authentication Accept any other appropriate response	**2**

Question Number	Answer	Mark
2 (b)	Award **one** mark for the correct reason and **one** mark for a justification of that reason, up to a maximum of **two** marks. • To confirm students have read the policy (1) so they agree to abide by the rules (1) • To prove the users has agreed to the policy (1) so they can be sanctioned if they break the rules (1) Accept any other appropriate response	**2**

Question Number	Answer	Mark
2 (c)	Award **one** mark for each correctly identified and labelled accessibility feature and **one** mark for correctly stating how each feature helps visually impaired students, up to a maximum of **four** marks. • Screen Reader icon (1) which will use text to speech to read out the form to the student (1) • Adjustable typeface/font size icon (1) so that the student can change the size/type of font to suit them (1) • Colour blind icon (1) so that the form colour can be adapted to suit the students' needs (1) Accept alternative/appropriate wording of the accessibility features	**4**

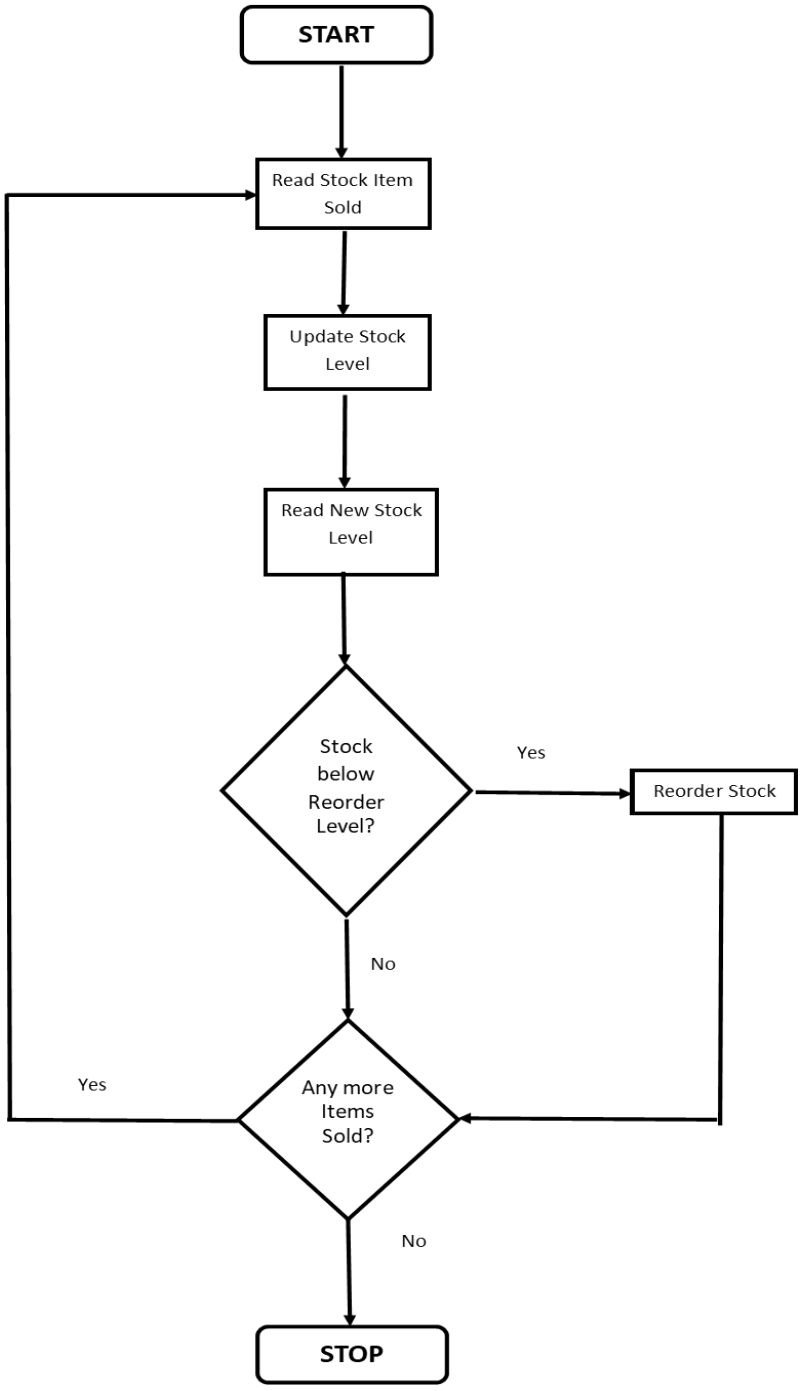
Question Number	Answer	Mark
2 (d)	Award **one** mark for each correct internal threat and **one** mark for a justification of each threat, up to a maximum of **four** marks. • Using portable storage devices / downloading from the internet (1) resulting in malware being (accidentally) introduced to the school's systems (1) • Unintentional disclosure of data (1) because staff have been tricked into giving out confidential school data (to a third party) (1) • Overriding security settings (1) which could allow the school's data/settings to be changed/deleted by unauthorised users (1) Accept any other appropriate response	**4**

Question Number	Answer	Mark
3 (a)	Award **one** mark for a correct drawback and **one** mark for a justification of that drawback, up to a maximum of **two** marks. • May need more staff (1) because managing social media is time consuming (1) • Need to respond quickly to messages (1) because customers will expect an answer straight away (1) • Negative comments (1) because they could affect the supermarket's reputation (1) • Less personal connection (1) because there is a lack of emotional connection online (1) **Drawback and explanation may be reversed** Accept any other appropriate response	**2**

Question Number	Answer	Mark
3 (b)	Award **one** mark for each correct usage and settings policy and **one** mark for a justification of each policy, up to a maximum of **four** marks. • Use Auto power off (1) so that the tills switch off automatically when the store closes (at night) (1) • Use Power-saving settings (1) so that tills can hibernate/snooze/sleep/lower monitor brightness/go into standby when they are not in use /after a set time (1) Accept any other appropriate response	**4**

Question Number	Answer	Mark
3 (c)	Award **one** mark for each correct way and **one** mark for a justification of each way, up to a maximum of **four** marks. • To find out how often loyalty cards are used (1) so that it can analysis shopping trends (1) • To find out what customers like (1) so it can provide customers with offers on the products they buy regularly (1) • To share customer data between branches (1) so it can build a profile of their customers (1)	**4**

	• To provide customers with points/rewards (1) so customers are encouraged to keep shopping with Ladle Supermarket (1) Accept any other appropriate response	

Question Number	Answer	Mark
3 (d)	Example…. (Note: Other solutions can be credited)  Accept any other relevant phrasing/wording	6

	Credit alternative solutions that use correct logic and would produce the expected outcome.	

Level	Mark	Descriptor
Level 0	0	No rewardable content
Level 1	1-2	• Limited use of appropriate notation • Limited use of appropriate connections and directions of data/information flow • Limited coverage of scenario requirements
Level 2	3-4	• Some use of appropriate notation • Some use of appropriate connections and directions of data/information flow • Some coverage of scenario requirements
Level 3	5-6	• Mostly accurate use of appropriate notation • Mostly accurate use of appropriate connections and directions of data/information flow • Mostly accurate coverage of scenario requirements

Question Number	Answer	Mark
4 (a)	A description of how encryption can protect transmitted data. To include **three** from: • Uses an encryption algorithm (1) • To create an (encryption) key (1) • And code (cypher text)/jumble/scramble the data (1) • So that data is unreadable (1) • The data is transmitted with a key (1) • The key is used to decrypt the data (1) Accept any other appropriate response	**3**

Question Number	Answer	Mark
4 (b)	Award **one** mark for a correct reason and **one** mark for a justification for that reason, up to a maximum of **two** marks • Perform penetration testing (1) to identify weaknesses in its data security systems (1) • Analyse system data/behaviours (1) to identify potential risks (1) Accept any other appropriate response	**2**

Question Number	Answer	Mark
4 (c)	Award one mark for a correct impact, **one** mark for a justification for that impact, and **one** mark for an expansion of the justification (1), up to a maximum of **three** marks • They could suffer data loss (1) resulting in damage to their public image (1) leading to loss of future business (1) • Customers would close their accounts (1) take legal action (1) leading to financial loss (1) • Downtime (1) causing reduction in productivity (1) whilst data/systems is/are secured/recovered (1) Accept any other appropriate response	**3**

Question Number	Indicative content	Mark
4 (d)	Responses will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Responses may cover some or all indicative content, but learners should be rewarded for other responses. **Discussion may consider:** **Methods of collecting data / Source of the data** – • Polls/surveys • Comments • Analytics • Reactions (e.g. likes, shares etc) Each method would provide a mix of qualitative and quantitative data. Comments may be informal and unstructured which would affect quality of the information provided. **Timings** Data will be up-to-date, can be date stamped. Most platforms provide tools so you can check data "live". **Quantity** Can result in a huge amount data that can be difficult to manage and interpret. **Content and relevance of data** The polls may be informal and not provide high quality feedback. Sample may be skewed based on time of post/platform used.	**6**

Level	Mark	Descriptor
Level 0	0	No rewardable content
Level 1	1-2	• Demonstrates isolated elements of knowledge and understanding; there will be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited discussion which contains generic assertions rather than considering different aspects and the relationship between them
Level 2	3-4	• Demonstrates some accurate knowledge and understanding; with only minor gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed discussion which considers some different aspects and some consideration of how they interrelate, but not always in a sustained way
Level 3	5-6	• Demonstrates mostly accurate and thorough/detailed knowledge and understanding • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical discussion which clearly considers a range of different aspects and considers how they interrelate, in a sustained way

Question Number	Indicative content	Mark
4 (e)	Responses will be credited according to the learner's demonstration of knowledge and understanding of the material, using the indicative content and level descriptors below. The indicative content that follows is not prescriptive. Responses may cover some or all indicative content, but learners should be rewarded for other responses. **Evaluation may consider:** **Legal** Bank must abide by the 9 principles outlined in the DPA. **Privacy** They must not share any data unless the customer has given them permission e.g. invasion of privacy, third party (advertisers). Strip out any personal data for the data collected. **Ethical** The bank must consider how it is going to use or share/publish this data and how it will impact on the customer e.g. race, disability, sexual orientation, religion, political beliefs.	**6**

	Responsibility for the data The bank must make sure that roles are clear in who will be handling the data – who has access, what data can be access, what can be done with the data. **Training** The bank must make sure that its staff know how to deal with data in a responsible way. Staff will need training on any legislation that affects the user requirements.	

Level	Mark	Descriptor
	0	No rewardable material
1	1-2	• Demonstrates isolated elements of knowledge and understanding; there will be major gaps or omissions • Few of the points made will be relevant to the context in the question • Limited evaluation/assessment which contains generic assertions leading to a conclusion which is partially supported
2	3-4	• Demonstrates some accurate knowledge and understanding; with only minor gaps or omissions • Some of the points made will be relevant to the context in the question, but the link will not always be clear • Displays a partially developed evaluation/assessment which considers some different competing points, although not always in detail, leading to a conclusion which is partially supported
3	5-6	• Demonstrates mostly accurate and thorough/detailed knowledge and understanding • Most of the points made will be relevant to the context in the question, and there will be clear links • Displays a well-developed and logical evaluation/assessment which clearly considers a range of different aspects and competing points, leading to a conclusion that is fully supported

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